Table I
Groundwater and Surface Water Cleanup Levels
Handy Andy #8 Site
Vancouver, Washington

	ARARs							site specific					
	Groundwater			Surface Water				Minimum Groundwater Cleanup Levels	Calculated Cancer Risk	Hazard Quotient	Adjustment	Calculated Hazard Quotient	Proposed groundwater Cleanup Levels
CHEMICAL	Method A	Method B	Federal MCLd	Method B	NTRe Human Heallth A	NTRe Human Heallth B	EPAf Water Criteria (Acute)						
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l					ug/l
Benzene[a]	5	1.51	5	43	1.2	71	5,300g	5	3.31E-06				5i
Ethylbenzene[b]	30	800	700	6,910	3,100	29,000	32,000g	700		0.875	0.6	0.5625	394
Toluene[b]	40	1,600	1,000	48,500	6,800	200,000	17,500g	1,000		0.625	0.3	0.375	375
Xylenes[b]	20	16,000	10,000	NA	NA	NA	NA	10,000		0.625	0.1	0.0625	1,000
Lead	5c	NA	15	NA	NA	NA	82h	15					15
TPH-G	1000c	NA	NA	NA	NA	NA	NA	1,000					1,000
								Hazard Quotient	Total	2.125		1	

MCL = Maximum Contaminant Level; NA = not available; ug/l = micrograms per liter.
Method A Source: MTCA Cleanup Regulations (WAC173-340-740, Table 2).
Method B Source: MTCA Cleanup Levels and Risk Calculations (CLARC II, Update, Feb. 1996) database.
Required analyses: BTEX: 8020 or 8240; TPH-G: WTPH-G (Washington Total Petroleum Hydrocarbons as gasoline); Lead (water total lead): 7421, (refer to WAC173-340-720(8)(a)).

Footnotes:
a Carcinogen
b Non-carcinogen
c Method A values will be used because no MTCA Method B values are available for lead and TPH-G
d Maximum contaminant level from 40 CFR 141.61
e Source: NTR = National Toxics Rule, (1993 amendment to 40 CFR Part 131 Federal regulations for Clean Water Act).
A = Values for human health for consumption of water & organisms (1.0e-006)
B = Values for human health for consumption of organisms only (1.0e-006)
f Source: Quality Criteria for Water, 1986, (EPA publication 440/5-86-001). Values based on fresh water acute criteria.
g Lowest Observed Effect Level (LOEL).
h Hardness Dependent Criteria (based on 100 mg/l)
i This number was based on Clarc II criteria. When using Method B and ARARs, calculated cancer risk is required to be less than 1 in 100,000. 3.3 times 1.51 ug/l benzene = 4.98 or 5 ug/l benzene.

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